

**WHAT IS CLAIMED AS NEW AND IS DESIRED TO BE SECURED BY
LETTERS PATENT OF THE UNITED STATES IS:**

1. A cleaning system comprising:

a cleaning medium comprising a magnetic substance guided onto an area to be cleaned; and

a magnetic field generating device configured to apply a magnetic force to said magnetic substance in said cleaning medium such that said magnetic substance and said area to be cleaned are rubbed together.
2. The cleaning system as defined in claim 1,

wherein at least a part of said magnetic substance is a magnetic fluid.
3. The cleaning system as defined in claim 1,

wherein a polishing agent is contained in said cleaning medium.
4. The cleaning system as defined in claim 1,

wherein said magnetic substance is enclosed in an elastic covering material.
5. The cleaning system as defined in claim 1,

wherein the particle shape of at least a part of said magnetic substance is polygonal.
6. The cleaning system as defined in claim 1,

wherein the respective particle sizes of said magnetic substances and said polishing agent are different.
7. The cleaning system as defined in claim 1,

wherein said cleaning system further includes a magnetic field changing device for successively changing at least either one of the strength and the direction of said magnetic field.
8. The cleaning system as defined in claim 7,

wherein said magnetic field changing device generates a successive flow of said cleaning medium to be directed in one direction by successively changing at least one of said intensity and direction of said magnetic field.

9. The cleaning system as defined in claim 8,

wherein said magnetic field changing device generates a rotative magnetic field and thereby generates the successive flow for directing said cleaning medium to said one direction.

10. The cleaning system as defined in claim 7,

wherein said magnetic field changing device changes said magnetic field to an alternate magnetic field.

11. The cleaning system as defined in claim 1,

wherein said cleaning system further comprises:

a dirt removing device, wherein, by controlling said magnetic field generating device, the magnetic field is generated having the strength to the extent that the dirt stripped from said cleaned object by the operation of said cleaning is caused to float up on the upper surface of said cleaning medium.

12. The cleaning system as defined in claim 1,

wherein said cleaning system further comprises:

a magnetic field mode changing device for changing successively said magnetic field mode exerted on the same position of said cleaned object by said magnetic field generating device.

13. The cleaning system as defined in claim 7,

wherein said cleaning system further comprises an abrasive material;

wherein, when at least one of the strength and the direction of said magnetic field is successively changed by said magnetic field changing device, the magnetic force applied

to the magnetic pole of said magnetic field generating device being utilized as a drive source; and

wherein, by the utilization as said drive source, the position excluding the position of said cleaned object is abrasively cleaned by said abrasive material.

14. The cleaning system as defined in claim 1,

wherein said cleaning system further comprises:

a flushing device for flushing said cleaned object after said cleaning operation and removing the remaining dirt after said cleaning operation.

15. A method of cleaning the object to be cleaned by use of a cleaning system comprising the steps of:

generating a magnetic field in a cleaning medium having a part thereof composed of magnetic substance and guided onto the area to be cleaned of the object;

applying a magnetic force to said magnetic substance by the action of said generated magnetic field; and

rubbing each other said magnetic substance and said area to be cleaned in order to clean said area to be cleaned with said cleaning medium.

16. The method of cleaning the object to be cleaned as defined in claim 15,

wherein at least a part of said magnetic substance is a magnetic fluid.

17. The method of cleaning the object to be cleaned as defined in claim 15,

wherein a polishing agent is contained in said cleaning medium in order to further effectively clean said cleaning position by the action of said magnetic force from said magnetic substance is employed.

18. The method of cleaning the object to be cleaned as defined in claim 15,

wherein said magnetic substance enclosed in an elastic covering material is employed.

19. The method of cleaning the object to be cleaned as defined in claim 15, wherein the particle shape of at least a part of said magnetic substance is polygonal.

20. The method of cleaning the object to be cleaned as defined in claim 15, wherein the respective particle sizes of said magnetic substance and said polishing agent are different.

21. The method of cleaning the object to be cleaned as defined in one of claims 15 through 20,

wherein said cleaning operation is performed by successively changing at least either one of the strength and the direction of said magnetic field.

22. The method of cleansing the object to be cleaned as defined in claim 21, wherein a successive flow of said cleaning medium to be directed in one direction is generated by successively changing at least one of said strength and direction of said magnetic field.

23. The method of cleaning the object to be cleaned as defined in claim 22, wherein a rotative magnetic field is generated.

24. The method of cleaning the object to be cleaned as defined in claim 21, wherein said magnetic field is an alternate magnetic field.

25. The method of cleaning the object to be cleaned as defined in claim 15, wherein, after said cleaning operation, the magnetic field is generated having the intensity to the extent that the dirt stripped from said cleaned object by the operation of said cleaning is caused to float up on the upper surface of said cleaning medium.

26. The method of cleaning the object to be cleaned as defined in claim 15, wherein said magnetic field performs said cleaning operation by changing successively said magnetic field mode exerted on the same position of said cleaned object

by use of said magnetic field generating device.

27. The method of cleaning the object to be cleaned as defined in claim 15, wherein, when at least one of the strength and the direction of said magnetic field generated for performing said cleaning operation is successively changed, the position excluding the position of said cleaned object cleaned with said cleaning medium is abrasively cleaned by said abrasive material which moves by utilizing as the drive source the magnetic force applied to the magnetic pole generating the magnetic field.

28. The method of cleaning the object to be cleaned as defined in claim 15, wherein, after said cleaning operation, said cleaned object is flushed, and the remaining dirt is removed even after said cleaning operation.

29. A cleaning system for cleaning the area to be cleaned is provided with: cleaning means having a part thereof composed of magnetic substance and guided onto an area to be cleaned; and

magnetic field generating means for applying a magnetic force to said magnetic substance by the action of said generated magnetic field in said cleaning means and rubbing each other said magnetic substance and said area to be cleaned,

wherein said cleaning position is cleaning by said rubbing operation with said cleaning means.

30. The cleaning system as defined in claim 29,

wherein at least a part of said magnetic substance is a magnetic fluid.

31. The cleaning system as defined in claim 29,

wherein a polishing agent is contained in said cleaning means in order to further effectively clean said area by the action of said magnetic force from said magnetic substance.